Datasheet: MCA2748A488

BATCH NUMBER 151288

Description:	RAT ANTI MOUSE CD36:Alexa Fluor®488
Specificity:	CD36
Other names:	GPIV (IIIb)
Format:	ALEXA FLUOR® 488
Product Type:	Monoclonal Antibody
Clone:	MF3
Isotype:	IgG2a
Quantity:	100 TESTS/1ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Mouse

Product Form

Purified IgG conjugated to Alexa Fluor 488 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®488	495	519

Preparation

Purified IgG prepared by affinity chromatography on Protein G

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide (NaN_3)
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.05mg/ml

Immunogen	IL-4 treated murine thioglycollate-elicited peritoneal macrophages
External Database Links	**UniProt:** Q08857 Related reagents **Entrez Gene:** 12491 Cd36 Related reagents
RRID	AB_1604780
Fusion Partners	Spleen cells from immunised DA rats were fused with cells of the Y3Ag 1.2.3 myeloma cell line
Specificity	**Rat anti Mouse CD36 antibody, clone MF3** recognizes mouse CD36, also known as platelet glycoprotein 4, glycoprotein IIIb or PAS IV. CD36 is an ~85 kDa multipass transmembrane glycoprotein primarily expressed on platelets, monocytes/macrophages, smooth muscle and endothelial cells. The CD36 molecule is type B scavenger receptor, which binds to multiple ligands including thrombospondin, anionic phospholipids, oxidized low density lipoproteins and long chain fatty acids. CD36 has diverse functions and is reported to play a role in innate immunity, platelet adhesion/aggregation and long chain fatty acid transport. The CD36 molecule also directly mediates cytoadhesion of erythrocytes infected with *Plasmodium falciparum*, and may be involved in the development of atherosclerotic lesions and the formation of foam cells. Rat anti Mouse CD36 antibody, clone MF3 has been shown to inhibit IL-4 induced thioglycollate-elicited peritoneal macrophage fusion and significantly block IL-4/GM-CSF-induced bone-marrorw derived macrophage fusion.
Flow Cytometry	Use 10ul of the suggested working dilution to label $1x10^6$ cells in 100ul.
References	1. Helming, L. *et al.* (2009) The scavenger receptor CD36 plays a role in cytokine-induced macrophage fusion. J Cell Sci. 122 (Pt 4): 453-9. 2. Mwaikambo, B.R. *et al.* (2009) Hypoxia up-regulates CD36 expression and function via hypoxia-inducible factor-1- and phosphatidylinositol 3-kinase-dependent mechanisms. J Biol Chem. 284: 26695-707. 3. Yang, C.N. *et al.* (2011) Mechanism mediating oligomeric Aβ clearance by naïve primary microglia. Neurobiol Dis. 42 (3): 221-30. 4. Seeds, R.E. *et al.* (2011) The role of myeloid receptors on murine plasmacytoid dendritic cells in induction of type I interferon. Int Immunopharmacol. 11: 794-801. 5. Samovski, D. *et al.* (2012) Insulin and AMPK regulate FA translocase/CD36 plasma membrane recruitment in cardiomyocytes via Rab GAP AS160 and Rab8a Rab GTPase. J Lipid Res. 53 (4): 709-17. 6. Zhou, D. *et al.* (2012) CD36 level and trafficking are determinants of lipolysis in adipocytes. FASEB J. 26 (11): 4733-42. 7. Nie, S. *et al.* (2015) Detection of atherosclerotic lesions and intimal macrophages using CD36-targeted nanovesicles. J Control Release. pii: S0168-3659(15)30173-5.

8. Samovski, D. *et al.* (2015) Regulation of AMPK activation by CD36 links fatty acid uptake to β-oxidation. Diabetes. 64 (2): 353-9.
9. Pugholm, L.H. *et al.* (2015) Enhanced Humoral Responses Induced by Targeting of Antigen to Murine Dendritic Cells. Scand J Immunol. 82 (6): 515-22.
10. Miyazaki H *et al.* (2014) Fatty acid binding protein 7 regulates phagocytosis and cytokine production in Kupffer cells during liver injury. Am J Pathol. 184 (9): 2505-15.
11. Sui, Y. *et al.* (2018) Perinatal Bisphenol A Exposure Increases Atherosclerosis in Adult Male PXR-Humanized Mice. Endocrinology. 159 (4): 1595-608.
12. Lund, H. *et al.* (2018) Competitive repopulation of an empty microglial niche yields functionally distinct subsets of microglia-like cells. Nat Commun. 9 (1): 4845.
13. Dellinger, A. *et al.* (2013) Functionalization of gadolinium metallofullerenes for detecting atherosclerotic plaque lesions by cardiovascular magnetic resonance. J Cardiovasc Magn Reson. 15: 7.

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2748A488 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

RAT IgG2a NEGATIVE CONTROL:Alexa Fluor® 488 (MCA1212A488)

Recommended Useful Reagents

MOUSE SEROBLOCK FcR (BUF041A)
MOUSE SEROBLOCK FcR (BUF041B)

North & South America Tel: +1 800 265 7376
Fax: +1 919 878 3751
Email: antibody_sales_us@bio-rad.com

Worldwide Tel: +44 (0)1865 852 700
Fax: +44 (0)1865 852 739
Email: antibody_sales_uk@bio-rad.com

Europe Tel: +49 (0) 89 8090 95 21
Fax: +49 (0) 89 8090 95 50
Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M367398:200529'

Printed on 01 Jul 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint